WHAT IS CLAIMED IS:

1) A process for the preparation of alkylhalosilanes by reaction of an alkyl halide, preferably CH_3Cl, with a solid body, referred to as contact body, formed of silicon and of a catalytic system comprising (α) a copper catalyst and (β) a group of promoting additives comprising:

- an additive $\beta 1$ chosen from metallic zinc, a zinc-based compound and a mixture of these entities,
- an additive $\beta 2$ chosen from tin, a tin-based compound and a mixture of these entities,
- optionally an additive $\beta 3$ chosen from cesium, potassium, rubidium, a compound derived from these metals and a mixture of these entities,

said direct synthesis process being characterized by the following points, taken in combination:

- the copper catalyst (α) is in the form of metallic copper, of a copper halide or of a mixture of these entities,
- the contact body additionally includes a supplementary promoting additive $\beta 4$ chosen from a derivative of an acid of phosphorus and a mixture of these entities.

2) The process as claimed in claim 1, characterized in that the catalyst (α) is used at a content by weight ranging from 1 to 20%, with respect to the weight of silicon introduced.

3) The process as claimed in claim 1 or 2, characterized in that the supplementary promoting additive $\beta 4$ is chosen from: an alkali metal salt, an alkaline earth metal salt or a metal salt of a hypophosphorous acid; an alkali metal salt, an alkaline earth metal salt or a metal salt of a phosphorous acid (ortho, pyro, meta); an alkali metal salt, an alkaline earth metal salt or a metal salt of a hypophosphoric acid; an alkali metal salt, an alkaline earth metal salt or a metal salt of a phosphoric acid (ortho, pyro, meta); an alkali metal salt of a polyphosphoric acid of formula $M_{n+2}(P_nO_{3n+1})$ where M represents an alkali metal and n is a number ranging from 1 to 10; and a mixture of these salts.

4) The process as claimed in any one of claims 1 to 3, characterized in that the content of additive $\beta 4$ lies within the range extending from 50 to 3000 ppm.

5) The process as claimed in any one of claims 1 to 4, characterized in that, according to a first alternative embodiment of the invention, the supplementary promoting

additive $\beta 4$ is added to the contact body (beside the silicon, copper catalyst and promoting additives $\beta 1$, $\beta 2$ and optionally $\beta 3$) in the state in which it naturally occurs.

6) The process as claimed in claim 5, characterized in that use is made of sodium hypophosphite NaH_2PO_2, potassium hypophosphite KH_2PO_2, calcium hypophosphite $Ca(H_2PO_2)_2$, magnesium hypophosphite $Mg(H_2PO_2)_2$, copper(II) hypophosphite $Cu(H_2PO_2)_2$ and/or aluminum hypophosphite $Al(H_2PO_2)_3$.

7) The process as claimed in claim 5 or 6, characterized in that calcium hypophosphite $Ca(H_2PO_2)_2$ is used.

8) The process as claimed in any one of claims 1 to 4, characterized in that, according to a second alternative embodiment of the invention, the supplementary promoting additive $\beta 4$ is added to the contact body (beside the silicon and promoting additives $\beta 1$, $\beta 2$ and optionally $\beta 3$) in the form of an adduct comprising the copper halide constituting the catalyst (α) and at least one derivative of an acid of phosphorus.

9) The process as claimed in claim 8, characterized in that use is made of trisodium phosphate Na_3PO_4, tripotassium phosphate K_3PO_4, monocalcium phosphate $Ca(H_2PO_4)_2$, dicalcium phosphate $CaHPO_4$, tricalcium phosphate $Ca_3(PO_4)_2$, basic calcium orthophosphate $Ca_5(PO_4)_3OH$, copper(II) phosphate $Cu(H_2PO_4)_2$ and/or sodium polyphosphate $Na_5P_3O_{10}$.

10) The process as claimed in claim 8 or 9, characterized in that use is made of tricalcium phosphate $Ca_3(PO_4)_2$ and/or basic orthophosphate $Ca_5(PO_4)_3OH$.

11) The process as claimed in any one of claims 8 to 10, characterized in that the amount of catalyst (α) is chosen, within the general region of variation as claimed in claim 2 and according to the composition of the adduct, so as to contribute, to the contact body, a content of derivative(s) of an acid of phosphorus, calculated as ppm of elemental phosphorus with respect to the weight of silicon introduced, which lies within the range extending from 50 to 3000 ppm.

12) The process as claimed in any one of claims 1 to 11, characterized in that the content of additive $\beta 1$ lies within the range extending from 0.01 to 2.0%.

13) The process as claimed in any one of claims 1 to 12, characterized in that the additive $\beta 1$ is metallic zinc and/or zinc chloride.

14) The process as claimed in any one of claims 1 to 13, characterized in that the content of additive $\beta 2$ lies within the range extending from 10 to 500 ppm.

15) The process as claimed in any one of claims 1 to 14, characterized in that the additive $\beta 2$ is tin metal.

16) The process as claimed in claim 15, characterized in that the metallic tin is introduced in the form of bronze.

17) The process as claimed in any one of claims 1 to 16, characterized in that the content of additive $\beta 3$, when one of them is used, lies within the range extending from 0.01 to 2.0%.

18) The process as claimed in claim 17, characterized in that the additive $\beta 3$ is cesium chloride, potassium chloride, rubidium chloride and/or a mixture of these compounds.

19) The process as claimed in any one of claims 1 to 18, characterized in that the direct synthesis reaction is carried out at a temperature lying within the range extending from 260°C to 400°C, under a pressure equal to or greater than atmospheric pressure.